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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,167	01/14/2000	Ronald Bjorklund	838	8032

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EXAMINER
YANG, CLARA I

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/483,167	BJORKLUND ET AL.	
	Examiner	Art Unit	
	Clara Yang	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *19-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 January 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. The numbering of claims is improper. Two claims are numbered 6. Misnumbered claims 6 (second occurrence) - 32 have been renumbered 7 - 33.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-18, drawn to a multi-tier system for digital radio communication, classified in class 340, subclass 7.2.

   II. Claims 19 - 23, drawn to a system for remotely controlling door locks, classified in class 340, subclass 542.

   III. Claims 24 - 25, drawn to a system for remotely controlling remote individual room temperature control units, classified in class 340, subclass 3.1.

   IV. Claims 26 - 28, drawn to a base station system, classified in class 455, subclass 91.

   V. Claims 29 - 33, drawn to a wireless network of customer inquiry stations, classified in class 340, subclass 5.1.

3. The inventions are distinct, each from the other because:

   ◊ Invention I and II, III, and V are related as genus and species. Invention I is a multi-tier system for digital radio communication comprising of a host connected to a local area network (LAN), two tiers of wireless base stations, and remote units, such as data collection devices, connected to the base stations. The invention further specifies that each tier of the system operate in accordance to a unique protocol. Inventions II, III, and V are systems for remotely controlling door locks, individual room temperature control units, and customer inquiry stations; therefore, Inventions II, III, and V are different embodiments of Invention I and are patentably distinct species of Invention I.

   ◊ Inventions I and IV are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability,

and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed, because Invention I may be patentable without the details of Invention IV. The subcombination has separate utility such as providing wireless point-to-point communication from a server in a building to a gateway in another building where the base stations must blend into their surroundings.

- ◊ Inventions II, III, and V and Invention IV are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed, because Inventions II, III, and V may be patentable without the details of Invention IV. The subcombination has separate utility such as providing wireless point-to-point communication from a server in a building to a gateway in another building where the base stations must blend into their surroundings.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. During a telephone conversation with Mark Koffsky on 23 July 2002, a provisional election was made without traverse to prosecute the invention of a multi-tier system for digital radio communication, claims 1 - 18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19 – 33 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

6. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information

submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

7.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 - 3, 5, 7 - 10, and 12 - 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Mahany et al. U. S. Patent No. 5,790,536.

Referring to Claim 1, Mahany teaches a multi-tier communication system comprising: (a) a first-tier base station that has a first radio transceiver operating in accordance with a first communication protocol and is connected to a local area network (LAN) (see Fig. 1C, base station 56 - 59; Col. 8, lines 66 - 67 and Col. 9, lines 1 - 9; Col. 10, lines 55 - 58; and Col. 11, lines 5 - 9); (b) a second-tier base station that comprises a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol (see Col. 10, lines 40 - 42 and Col. 11, lines 13 - 15) and is connected to the first-tier base station (see Col. 10, lines 48 - 55 and 59 - 67); (c) a first-tier remote unit (called "mobile computing device") wirelessly connected to the first-tier base station (called "access point") through the first radio transceiver (see Col. 11, lines 5 - 9); and (d) a second-tier remote unit

(called "peripheral") wirelessly connected to the second-tier base station (called "mobile computing device") through the second radio transceiver (see Col. 11, lines 13 - 15).

Regarding Claims 2, 3 and 5, Mahany's first-tier or second-tier remote unit comprises a data collection device that is a bar code reader (see Fig. 45; Col. 10, lines 34 - 36; and Col. 62, lines 30 - 32) or a radio terminal (see Col. 63, line 31). Here it is understood that the radio terminal can be a pager.

Regarding Claims 7 and 8, Mahany's first-tier or second-tier remote unit comprises a computer peripheral such as a printer (see Col. 10, lines 31 - 36) or a hand-held computer terminal (see Col. 9, lines 27 - 29).

Regarding Claim 9 and 10, Mahany teaches that the second-tier base station is wirelessly connected to the first-tier base station and that the first-tier base station is wirelessly connected to the LAN (see Fig. 1C and Col. 11, lines 39 - 49).

Regarding Claim 12, Mahany teaches that mobile computing devices (i.e. second-tier base stations) are able to wirelessly communication with each other (see Col. 9, lines 21 - 24 and Col. 10, lines 40 - 42).

Referring to Claim 13, Mahany teaches a multi-tier communication system comprising: (a) a host connected to a LAN (see Fig. 1C); (b) a first-tier base station that has a first radio transceiver for spread spectrum radio transmission (see Col. 42, lines 54 - 58) in accordance with a first communication protocol and is connected to a local area network (LAN) (see Fig. 1C, base station 56 - 59; Col. 8, lines 66 - 67 and Col. 9, lines 1 - 9; Col. 10, lines 55 - 58; and Col. 11, lines 5 - 9); (c) a second-tier base station that comprises a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol (see Col. 10, lines 40 - 42 and Col. 11, lines 13 - 15) and is connected to the first-tier

base station (see Col. 10, lines 48 - 55 and 59 - 67); and (d) a remote unit (called "peripheral") wirelessly connected to the second-tier base station (called "mobile computing device") through the second radio transceiver (see Fig. 1C, peripheral P and Col. 11, lines 13 - 15).

Regarding Claim 14, because Mahany imparts that the access points (i.e. base stations) can be configured to participate on both the premises LAN (i.e. as a first-tier base station) and the peripheral LAN (i.e. as a second-tier base station) and that a single radio transceiver can be used to achieve communication within the premises and peripheral LANs (see Col. 10, lines 45 - 47 and Col. 11, lines 1 - 4), it is interred that single radio transceiver is both a first-tier and second-tier base station and that it is in an enclosure.

Regarding Claim 15, Mahany teaches that mobile computing devices (i.e. second-tier base stations) are able to communication with each other (see Col. 9, lines 21 - 24). It is inferred that the communication between the second-tier base stations is wireless because the base stations are mobile.

Referring to Claim 16, Mahany teaches a multi-tier communication system comprising: (a) a host connected to a LAN (see Fig. 1C); (b) a first-tier base station that has a first radio transceiver for spread spectrum radio transmission (see Col. 42, lines 54 - 58) in accordance with a first communication protocol and is connected to a local area network (LAN) (see Fig. 1C, base station 56 - 59; Col. 8, lines 66 - 67 and Col. 9, lines 1 - 9; Col. 10, lines 55 - 58; and Col. 11, lines 5 - 9); (c) a second-tier base station that comprises a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol (see Col. 10, lines 40 - 42 and Col. 11, lines 13 - 15) and is connected to the first-tier base station (see Col. 10, lines 48 - 55 and 59 - 67); and (d) a remote unit (called "peripheral") wirelessly connected to the second-tier base station (called "mobile computing device") through

the second radio transceiver (see Fig. 1C, peripheral P and Col. 11, lines 13 - 15). Because Mahany teaches that mobile computing devices (i.e. second-tier base stations) are able to wirelessly communication with each other (see Col. 9, lines 21 - 24 and Col. 11, lines 30 - 34), it is inferred that Mahany's communication system can include another second-tier base station that is wirelessly connected to the second-tier base station.

Regarding Claim 17, because Mahany conveys that radio communication through the peripheral LAN (i.e. the second tier) uses a second communication protocol (i.e., a lower-power single frequency protocol) that differs from the one use by the premises LAN (see Col. 11, lines 5 - 15) and that mobile computing devices (i.e. second-tier base stations) are able to wirelessly communication with each other (see Col. 9, lines 21 - 24 and Col. 11, lines 30 - 34), it is understood that second-tier base stations communicate with each other in accordance with the second communication protocol.

Regarding Claim 18, in Fig. 1C, Mahany illustrates wirelessly and serially connecting a plurality of second-tier base stations to a first-tier base station. Each second-tier base station comprises a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol (see Col. 10, lines 40 - 42 and Col. 11, lines 13 - 15).

10. Claims 1, 4, 6, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al. U.S. Patent No. 5,673,252.

Referring to Claim 1, Johnson's multi-tier communication system includes: (a) a first-tier base station, or intermediate data terminal (IDT), that has a first radio transceiver operating in accordance with a first communication protocol and is connected to a local area network (LAN) (see Fig. 1, IDT 114; and Col. 22, lines 41 - 45 and 56 - 57); (b) a second-tier base station, or

remote cell node (RCN), that comprises a second radio transceiver operating in accordance with a second communication protocol independent of the first communication protocol and is connected to the first-tier base station (see Fig. 1, RCN 112; Col. 11, lines 46 - 49; and Col. 18, lines 17 - 20); (c) a first-tier remote unit wirelessly connected to the first-tier base station (IDT) through the first radio transceiver (see Fig. 1, special and Col. 6, lines 23 - 28); and (d) a second-tier remote unit, or network service module (NSM), wirelessly connected to the second-tier base station (RCN) through the second radio transceiver (see Col. 5, lines 47 - 52). Because Johnson's multi-tier system for digital radio packet communication is a wide area communications network, it is understood that the central data terminal (CDT) is connected to a wide area network (WAN) and that the IDTs are connected to a LAN.

Regarding Claim 4, Johnson's second-tier remote unit (or NSM) comprises a vending machine (see Col. 10, lines 6 - 9).

Regarding Claim 6, because Johnson discloses that the NSM has a plurality of sensors (see Fig. 2, basic sensors 320 and other sensors 322), that NSMs include an alarm monitoring module or any other module that can be used with the communications network (see Col. 10, lines 4 - 6), and that the NSM-packet signal can be used to convey alarm conditions such as tilting of the network service module indicative of tampering or other unusual condition, it is understood that the NSM comprises a door lock to be monitored and controlled by the system.

Regarding Claim 11, Johnson imparts that the IDT and RCN can be connected via cable (see Col. 18, lines 65 - 67); therefore the RCN is connected to the IDT through a serial port.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Meier et al. U.S. Patent No. 5,295,154: Meier teaches an apparatus and a method for routing data in a radio data communication system having one or more host computers, one or more intermediate base stations, and one or more RF terminals to control the routing of data to and from the RF terminals and the host computer efficiently and dynamically.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (703) 305-4086. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 350-3900.

CY
July 25, 2002

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
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